Patent claims

1. A rotary knob for an electrical system, comprising:

- a body (10) on which can be mounted in a fluid-tight manner a rotary maneuvering member (20) and to house a driving part (50), the maneuvering member having a shank (22) for moving the driving part, the body also serving as a support for at least one electrical block (C) switchable in response to the rotation of the maneuvering member via at least one axially moving slider (11),
- the maneuvering member (20) being mounted in a rotary manner about an axis (X) with a limited angular movement, in order to assume at least two functional positions, maintained or transitory, and being locked in rotation with the driving part (50) which is provided with cam surfaces for moving the sliders,

characterized in that

- the body (10) of the knob has a recessed part (10a) provided with an external cylindrical flange (12), an internal cylindrical sleeve (13) and a cup (15) defined between the flange and the sleeve in order to house a helical spring (R) acting on a sensitivity ring (30) separate from the driving part and movable in translation or, respectively, a torsion spring (R') acting on the maneuvering member (20),
- the cylindrical sleeve (13) defines a central opening (14) with which a centering seat (23) of the shank (22) of the maneuvering member cooperates.

2. The rotary knob as claimed in claim 1, characterized in that the shank (22) of the maneuvering member and the driving part (50) each have a cylindrical seat (23,55) ensuring the centering, in the central opening (14) of the sleeve (13), of the rotary equipment consisting of the maneuvering member and the driving part (50).

3. The rotary knob as claimed in claim 1, characterized in that the driving part (50) is mounted by means of interlocking shapes (56, 27) on the shank (22) of the maneuvering member and has a shoulder (54) connected to its seat (55) for being applied axially against a bearing face of the body.

4. The rotary knob as claimed in claim 1, characterized in that the compression or torsion spring (R, R') housed in the cup (15) has a height substantially of the same order as the height of the cylindrical sleeve (13).

5. The rotary knob as claimed in claim 1, characterized in that, when the cup (15) houses the sensitivity ring (30) and its compression spring (R), the sensitivity ring:
- is separate from the driving part (50), and is coaxial with the maneuvering member (20) and movable in translation,
- has a diametral size corresponding to that of the cup (15), and
- cooperates with the maneuvering member (20) by means of cam shapes (32, 26) provided on their respective peripheries and provided with notches corresponding to the functional positions.

6. The rotary knob as claimed in claim 6, characterized in that there is, between the external cylindrical flange (12) of the body and the cup (15), an annular space (16) stepped with respect to the cup and able to house a sealing device.

7. The rotary knob as claimed in claim 6, characterized in that:
- the hand grip (20) has a head (21) provided with a reentrant annular rim (26),

- the annular space (16) houses on the one hand the annular rim (26) and on the other hand a ring (40) with a cylindrical skirt (42),
- a first radial annular interstice (16a) is provided between the flange (12) and the annular rim (26) and a second radial annular interstice (16b) is provided between the annular rim (26) and the cylindrical skirt (42), the two interstices (16a, 16b) in series forming a sealing chicane.

8. The rotary knob as claimed in claim 7, characterized in that the guard ring has a stop which limits the movement of the ring against the force of the spring.

9. The rotary knob as claimed in claim 6, characterized in that, when the cup (15) houses a torsion spring (R'), a chicane sealing device (25) is provided between the cylindrical flange (12) of the body and comprises a skirt of the grasping head (21) and an intermediate cylindrical flange (17) of the body separating the cup (15) from the annular space (16).